

BIDDER QUERIES LOT#3

RFQ No. : B240-910-KA-MR-5010-504

Project : GAS TURBINE DRIVEN CENTRIFUGAL COMPRESSOR PACKAGE

SR NO.	RFQ CLAUSE REFERENCE	CLAUSE DESCRIPTION	BIDDERS QUERIES /DEVIATIONS	EIL/GAIL Response
1	Lube oil pump (Rotary);B240-910-80-42-DS-1008 Rev. No. A	For Shaft Driven LO Pump - Bidder clarifies Relief valve will be Built in and external option is not feasible. EIL response: Please follow RFQ requirements	Bidder clarifies Relief valve is already provided built-in on the shaft driven pump and does not compromise the functionality.Separate relief valve is not possible due to space limitation on the GT package.This is the vendor standard proven design and has been supplied for GTC packages	Built-in relief valves for shaft driven LO pump can also be accepted, based on manufacturer's standard field proven design. However, motor driven LO pumps are to be provided with external relief valves.
2	B240-910-80-42-SS-5010 Section C -1.1.8	Integration with existing system : Please clarify scope of integration. Bidders understands that all communication needs to be established with exsiting system. Kindly confirm. EIL Response: Bidder to refer Job Specification-Instrumentation, Special requirements (Other Notes/S.No. 11.9) for details.	1) Bidder wishes to clarify that only interfacing through serial links for monitoring purpose is required. Please confirm whether bidder's understanding is possible. 2) Bidder understands that any upgradation of software/hardware of DCS for logics/graphics is excluded from bidder's scope. 3) Request EIL to please provide details of the system, interface details of current system, details of exisitng software / hardware in DCS/ Purchaser PLC.	<u>Integration of Compressor control systems with existing DCS/PLC systems:</u> Integration of Compressor control systems with existing DCS/PLC systems including up gradation (software and hardware) of existing DCS/PLC system for logics, graphics etc. and establishing all the serial links with existing DCS/PLC/SCADA (RTU). Compressor vendor to engage services of GAIL's existing DCS/PLC vendor for integration activities and successful implementation of required logistics of GTC compressor with existing DCS/PLC. Existing DCS/PLC Make: Honeywell
3	JOB SPECIFICATION INSTRUMENTATION GAS TURBINE DRIVEN CENTRIFUGAL COMPRESSOR PACKAGE; B240-910-16-51-SP-5010; REV A/2.8	Refer B240-910-80-42-SP-5010 Clause 9.7.9 (v) . In line with this clause, Bidder clarifies all instruments inside enclosure which will be active before pressurisation or remain energised after loss of pressurization will be suitable for Zone-1 as per clause 2. 8 of Instrument Job Spec . Rest all instruments (inside enclosure) are suitable for Zone 2 area classification in line with Clause 5 of B240-910-16-50-SP-5010 (Electrical Job Spec). EIL Response: All instruments shall be suitable to Zone-1 Gr IIC T3.	As clarified in pre-bid meeting, we would like clarify as follows Bidder would meet Zone-1 Gr IIC T3 except for following instruments 1) Instruments inside the Gas Turbine enclosure which will be energised only when GT enclosure is pressurised. They will not be active before pressurisation or remain energised after loss of pressurisation. These instruments will effectively encounter air from safe area and hence Zone -1 Gr II C is not required. Considering air from safe area will be inside enclosure Ex n Zone 2, Gas Group IIA /IIB is superior than the actual requirement. Hence, we request to	All instruments shall be certified for Zone-1 Gr IIC T3 as per MR requirment and project philosphy.
4	JOB SPECIFICATION INSTRUMENTATION GAS TURBINE DRIVEN CENTRIFUGAL COMPRESSOR PACKAGE; B240-910-16-51-SP-5010; REV A/5.1	Cable sizes for Instruments. Bidder clarifies that Bidder clarifies that cables of GT Package shall be as per bidders proven standard accepted gloably. EIL Response: Not acceptable. All cables pair and thickness shall be as per MR requirment.	Bidder clarifies cable cross section/thickness on the GT package as per MR. is not feasbile for any change due to pre-engineered package and space limitations.This is the vendor proven design and has been supplied for GTC packages worldwide. Required references can be provided. This will be applicable for cables in bidder package. Bidder will make adequate provision in JB's so as to ensure that customer cable thickness can be terminated in the JB's provided by bidder. Considering we will meet interface requirements of RFQ request to kindly accept.	Only for GTC skid Instruments vendor's standard cables may be provided. However for all other Instruments cables as per MR shall be provided.

5	JOB SPECIFICATION INSTRUMENTATION GAS TURBINE DRIVEN CENTRIFUGAL COMPRESSOR PACKAGE; B240-910-16-51- SP-5010; REV A/6.2	Type of JB's: As per clause 5.1.1 of B240-910-16-50-SP-5010 (Electrical Job Spec) area classification of compressor package is Zone 2, Ex-de. Hence, Exe JB's shall be provided. Exe JB's are also suitable for Zone 1 as only terminal strips are present inside JB. EIL reply : Not acceptable. Flame proof type JB shall be provided for for all Ex-proof Instruments.	Bidder is unclear to the reason of rejection considering that area classification of complete package is Zone 2, Ex- de which allows junction box to be Exe JB's (Refer .1.1 of B240-910-16-50-SP-5010 Electrical Job Spec). This philosophy is followed worldwide even for very large sized Motors which pose higher risks when compared to instruments. Additionally, as per Petroleum rules 2002, for Zone 2 minimum classification is non-sparking apparatus. Increased safety JB's are being proposed in line with the MR, which are superior to Petroleum rules 2002. Bidder further clarifies that there are space limitations to accommodate Exd JB's on the package. This solution is well referenced and proven worldwide and also Exe JB's for Exd equipment has been accepted by EIL multiples times in the past. Hence, considering we are meeting the requirements of area classification as specified in MR, we request to please accept Exe	Not acceptable. Flame proof type JB shall be provided for for all Ex-proof Instruments.
6	B240-910-80-42-SL-5010 Rev C	GT Starter Spares	As per Rev C list, Gas Starter Spares are removed. However for VFD - Motor starting spares are still applicable. We request to please re-consider applicable spare parts for the various starter options envisaged in the bid to have a level playing field.	Mandatory spare parts (Rev.C) are to be followed.
7	B240-910-80-42-SP-5010 Rev C	Clause 9.6.1	As per Pre-bid Replies, it is specied that Gear Box shall be sized for ISO rating of Gas Turbine. As per clause Clause 6.2 (ii) of Job Spec, no margin is being considered between Compressor Power and GT Power for Case 2 (which is max power case). Considering this scenario, we request to allow similar philosophy for Gear Box. As GT will deliver power based on compressor demand only, Bidder requests to accept 10% margin over max compressor power for Gear Box Rating. Service factor of 1.6 for GB will be	RFQ requirements on Gear Box rating to be followed.
8	DOCUMENT No. B240-910-80-42-SP-5010 Rev. C	Clause 10.0 - INSPECTION AND TESTING	Due to tight delivery schedule, Inspection and testing shall be as per OEM standard plan. However, this can be mutually discussed and finalized during detail engineering stage. Please confirm. This is inline with all other earlier EIL projects.	RFQ requirements to be followed.
9	DOCUMENT No. B240-910-80-42-SP-5010 Rev. C	Clause 10.2.2 -The PGTR shall be done with the process gas (as per Process datasheets) and at full load for 72 (Seventy two) hours duration to establish satisfactory performance	Performance test shall be carried out for a period of half an hour as per PTC 22. As per PTC 22, if the PG test period is more than half an hour, due to changing inlet conditions the integrity of test is affected. However, 72 hours of reliability and running test will be done. Please confirm.	PGTR duration will remain 72 hours as specified in the RFQ. PTC-22 norms are to be applied for Shop performance test of the GT.

10	JOB SPECIFICATION INSTRUMENTATION GAS TURBINE DRIVEN CENTRIFUGAL COMPRESSOR PACKAGE; B240-910-16-51- SP-5010; REV A/2.8	Intrinsically safe in general. Solenoid valves shall be flameproof.	1) Bidder clarifies All instruments inside enclosure which will be active before pressurisation or remain energised after loss of pressurization will be of Intrinsic Safety type except for the below for which Exd are provided which is suitable for Zone 1:-Fire detectors, Gas detectors & solenoid valves will be Exd as intrinsic safety is not technically feasible in these instruments. Gas detector technology needs heaters to keep lenses clear of water, so use more power and hence Exi is not feasible. Same for heat rise detectors where the working principle does not allow to have Exi. 2) Instruments which will not be active before pressurisation or remain energised after loss of pressurization will be either Exd or Exn. 3) Outside enclosure instruments - Vibro-switches which needs	All instruments shall be certified for Zone-1 Gr IIC T3 as per MR requirement and project philosophy.
11	PBQ Reply-1, Sno.59	MMS	Please refer to PBQ, point no. 59. It was requested to confirm the acceptance of separate MMS for GT (supplied by GT OEM) and separate MMS for compressor (supplied by compressor vendor). We understand that same is acceptable (as this is "Noted" by EIL). However, "One complete integrated system" is contradictory to	Separate MMS for GT (supplied by GT OEM) and separate MMS for compressor (supplied by compressor vendor) is acceptable. However both the MMS shall be integrated to the Common PLC based control system supplied by BIDDER
12	Lube oil pump (Horizontal-centrifugal); B240-910-80-42-DS-1008 Rev. No. A	Bidder clarifies Vertical Centrifugal pumps according to ISO5199 with lip seal will be provided instead of Horizontal pumps. EIL Response: Noted. However, the offered pumps shall be compliant to API 610/API 676 (as per offered type).	ISO pumps for this service are duly tested and is vendor standard design for the offered GT. These pumps are well proven, meet the intended use and reliability requirements of customer. Considering OEM design for GT and worldwide supplies, we request to kindly accept.	RFQ requirements are to be followed. API pumps are to be provided.
13	Lube oil pump (Rotary); B240-910-80-42-DS-1008 Rev. No. A	For Shaft Driven LO Pump - Bidder clarifies Relief valve will be Built in and external option is not feasible. EIL response: Please follow RFQ requirements	Bidder clarifies Relief valve is already provided built-in on the shaft driven pump and does not compromise the functionality. Separate relief valve is not possible due to space limitation on the GT package. This is the vendor standard proven design and has been supplied for GTC packages	Refer response to Sno.1 above.
14	B240-910-80-42-SS-5010 Section C -1.1.8	Integration with existing system : Please clarify scope of integration. Bidders understands that all communication needs to be established with existing system. Kindly confirm. EIL Response: Bidder to refer Job Specification-Instrumentation, Special requirements (Other Notes/S.No. 11.9) for details.	1) Bidder wishes to clarify that only interfacing through serial links for monitoring purpose is required. Please confirm whether bidder's understanding is possible. 2) Bidder understands that any upgradation of software/hardware of DCS for logics/graphics is excluded from bidder's scope. 3) Request EIL to please provide details of the system, interface details of current system, details of existing software / hardware	Refer response to Sno.2 above.

15	JOB SPECIFICATION INSTRUMENTATION GAS TURBINE DRIVEN CENTRIFUGAL COMPRESSOR PACKAGE; B240-910-16-51- SP-5010; REV A/2.8	Refer B240-910-80-42-SP-5010 Clause 9.7.9 (v) . In line with this clause, Bidder clarifies all instruments inside enclosure which will be active before pressurisation or remain energised after loss of pressurization will be suitable for Zone-1 as per clause 2. 8 of Instrument Job Spec . Rest all instruments (inside enclosure) are suitable for Zone 2 area classification in line with Clause 5 of B240-910-16-50-SP-5010 (Electrical Job Spec). EIL Response: All instruments shall be suitable to Zone-1 Gr IIC T3.	As clarified in pre-bid meeting, we would like clarify as follows Bidder would meet Zone-1 Gr IIC T3 except for following instruments 1) Instruments inside the Gas Turbine enclosure which will be energised only when GT enclosure is pressurised. They will not be active before pressurisation or remain energised after loss of pressurisation. These instruments will effectively encounter air from safe area and hence Zone -1 Gr II C is not required. Considering air from safe area will be inside enclosure Ex n Zone 2, Gas Group IIA /IIB is superior than the actual requirement. Hence, we request to please accept Ex n instrument, Zone 2, Gas Group IIA /IIB in line with area classification mentioned in Electrical Job Spec.	Refer response to Sno.3 above.
16	JOB SPECIFICATION INSTRUMENTATION GAS TURBINE DRIVEN CENTRIFUGAL COMPRESSOR PACKAGE; B240-910-16-51- SP-5010; REV A/5.1	Cable sizes for Instruments. Bidder clarifies that Bidder clarifies that cables of GT Package shall be as per bidders proven standard accepted globally. EIL Response: Not acceptable. All cables pair and thickness shall be as per MR requirment.	Bidder clarifies cable cross section/thickness on the GT package as per MR. is not feasbile for any change due to pre-engineered package and space limitations.This is the vendor proven design and has been supplied for GTC packages worldwide. Required references can be provided. This will be applicable for cables in bidder package. Bidder will make adequate provision in JB's so as to ensure that customer cable thickness can be terminated in the JB's provided by bidder. Considering we will meet interface requirements of RFQ request to kindly accept.	Refer response to Sno.4 above.
17	JOB SPECIFICATION INSTRUMENTATION GAS TURBINE DRIVEN CENTRIFUGAL COMPRESSOR PACKAGE; B240-910-16-51- SP-5010; REV A/6.2	Type of JB's: As per clause 5.1.1 of B240-910-16-50-SP-5010 (Electrical Job Spec) area classification of compressor package is Zone 2, Ex-de. Hence, Exe JB's shall be provided. Exe JB's are also suitable for Zone 1 as only terminal strips are present inside JB. EIL reply : Not acceptable. Flame proof type JB shall be provided for for all Ex-proof Instruments.	Bidder is unclear to the reason of rejection considering that area classification of complete package is Zone 2, Ex- de which allows junction box to be Exe JB's (Refer .1.1 of B240-910-16-50-SP-5010 Electrical Job Spec). This philosophy is followed worldwide even for very large sized Motors which pose higher risks when compared to instruments. Additionally, as per Petroleum rules 2002, for Zone 2 minimum classification is non-sparking apparatus. Increased safety JB's are being proposed in line with the MR, which are superior to Petroleum rules 2002. Bidder further clarifies that there are space limitations to accommodate Exd JB's on the package. This solution is well referenced and proven worldwide and also Exe JB's for Exd equipment has been accepted by EIL multiples times in the past. Hence, considering we are meeting the requirements of area classification as specified in MR, we request to please accept Exe	Refer response to Sno.5 above.
18	B240-910-80-42-SL-5010 Rev C	GT Starter Spares	As per Rev C list, Gas Starter Spares are removed. However for VFD - Motor starting spares are still applicable. We request to please re-consider applicable spare parts for the various starter options envisaged in the bid to have a level playing field.	Refer response to Sno.6 above.

19	B240-910-80-42-SP-5010 Rev C	Clause 9.6.1	As per Pre-bid Replies, it is specified that Gear Box shall be sized for ISO rating of Gas Turbine. As per clause Clause 6.2 (ii) of Job Spec, no margin is being considered between Compressor Power and GT Power for Case 2 (which is max power case). Considering this scenario, we request to allow similar philosophy for Gear Box. As GT will deliver power based on compressor demand only, Bidder requests to accept 10% margin over max compressor power for Gear Box Rating. Service factor of 1.6 for GB will be	Refer response to Sno.7 above.
20	PBQ Reply-1, Sno.2	Infeasible technical deviation	Please note that during the pre-bid meeting we had explained that some of the specification requirement can not be met due to inherent design limitations for the Gas Turbine. As Gas Turbine is a standard product, each OEM will have some deviations related to inherent design limitations which are technically infeasible to implement and hence accordingly, we had submitted the below query. As per EIL response, it is not clear that if only machine inherent design related technically infeasible deviations to RFQ specs will be allowed or not. The response is clear about API deviations but not clear about RFQ specs. We would like to re-iterate that if the same is not allowed for RFQ specifications then in order to submit the no deviation bid, we would need time to submit the detailed list of such deviations which needs to be discussed and finalized with EIL/GAIL before the bid submission. Please advise	Noted (only for Gas Turbine), as responded earlier also. However bidder is cautioned again to comply with the RFQ requirements with only TECHNICALLY INFEASIBLE Deviations.